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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/599,868	10/12/2006	Robert Desbrandes		5857

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E-Quantic Communications SARL a capital variable
Allee des Cheriniers
Givarlais, F-03190
FRANCE

EXAMINER

MONDT, JOHANNES P

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3663

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/599,868	Applicant(s) DESBRANDES ET AL.	
	Examiner JOHANNES P. MONDT	Art Unit 3663	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 September 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 47-93 is/are pending in the application.
- 4a) Of the above claim(s) 47-68 and 86-93 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 69-85 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>3 Forms 1449</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's elections of current claims 69-85 drawn to a process of use (corresponding to Group III) and of isotope ¹¹⁵In are inferred from the latest response and amendment. No argument of traverse is found. The restriction/election requirements are herewith made FINAL.

Accordingly, claims 69-85 are being examined and claims 47-68 and 86-93 have been withdrawn.

Response to Amendment

2. The amendment filed 9/25/10 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. MPEP, Appendix L, in particular, 35 U.S.C. 132(a), states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: Such further information on literature and background, or of the detailed description of the invention as applicant has introduced and may wish to make of record should be submitted in Remarks and / or Declaration(s) or Affidavit(s), but cannot be incorporated into the specification.

Applicant is required to cancel the new matter in the reply to this Office Action.

Information Disclosure Statement

3. The items listed in the Information Disclosure Statements ("IDS") filed 11/15/09, 2/13/10 and 9/25/10 have been considered. Signed copies of the corresponding Forms PTO-1449 are included with this Office action.

Specification

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. The Specification is objected to for failing to support the claimed invention by either a credible asserted utility or by a well-established utility, while the method as claimed is so insufficiently developed and supported in the specification as to be wholly inoperative. Applicant is referred to a recent review on quantum entanglement around the time of his invention (Genovese, M., Physics Reports 413 319-396 (2005)) in which the history of research on the much simpler case of photon entanglement together with all the difficulties of resolution and timing in painstaking experimental work over decades is reviewed. See, for instance, the concluding statement at the end of section 3.3 concerning resolution difficulties, which are discussed extensive elsewhere in Genovese. In contrast, applicant hardly presents any experimental data and presents no error analysis in connection with his experimental data. Applicant fully and casually ignores the huge problem of resolution in identifying the detector signals relevant for the experiment, and of timing. The time-honored way of proceeding is through basic research, with scrutinized and peer-reviewed experimental data, complete with error analysis. This is what Aspect and co-workers, and Horne-Zeilinger, and Shimoni-Holt etc., did (see, e.g., the discussion of references 34 and 83 in Genovese). In other

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words, evaluated, experimental data lending credibility to applicant's claims. In the absence thereof, the inventive method is considered to lack a credible utility. No doubt the utility is not well established either.

5. The Specification is further objected to for failing to support the invention as claimed by an enabling disclosure. One of skill in the art would not know how to use the method for its stated and asserted purpose, because of the above-described difficulties with identification of individual measurement objects and timing. In this regard it is further noted that regarding the breadth of the claims it is noted that the "preamble" asserts the method to be a method of controlling a remote deexcitation of an excitation by gamma rays, for which however the specific isomeric nuclei would have to be identified by specific and extremely skillful measurement techniques including timing. The specification does not explain how this is carried out. Regarding the nature of the invention and the state of the prior art, applicants' assertion in terms of the claim language would provide a true milestone in experimental physics if reduced to practice, yet the specification does not even provide the amount and quality of quantitative results expected in a basic research article. The level of ordinary skill is wholly inadequate to carry out the experimental work needed to use the invention for its stated purpose, because no one skill in the art has thus far succeeded while the specification does not provide specific directions and evaluated, experimental data to guide one skilled in the art. The level of predictability in the art is negligible, because the method as claimed would be a pioneering effort in basic research not supported by directions from applicant in terms of adequate working examples and evaluated, experimental

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data. Thus basic experimental research, and hence undue experimentation would at best be required to practice the invention. In light of the foregoing considerations examiner concludes that the invention by applicant is not enabled by the disclosure (MPEP 2164.01(a)).

Claim Rejections - 35 USC § 101 - §112

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

6. ***Claims 69-85*** are rejected under 35 U.S.C. 101 because the claimed invention is not supported by either a credible asserted utility or a well established utility.

The reasons for this rejection are the same as those set forth in the objection to the specification in section 4 above.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. ***Claims 69-85*** are also rejected under 35 U.S.C. 112, first paragraph.

Specifically, since the claimed invention is not supported by either a credible asserted utility or a well established utility for the reasons set forth above, one skilled in the art clearly would not know how to use the claimed invention.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

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Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

8. **Claims 69-85** are rejected under 35 U.S.C. 101 because the disclosed invention is inoperative and therefore lacks utility. The reason for this rejection is the same as the reason for the objection to the specification on account of the method being inoperative as set forth above in section 4.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

9. **Claims 69-85** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The reasons for this rejection are the same as the reasons for the objection to the specification as set forth above in section 5.

10. **Claims 69-85** are additionally rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. In particular, the limitation that the at least one excited isomeric nucleus has "at least one metastable state" requires enablement both for more than one metastable state and for the case of a single metastable state. However, examiner

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takes official notice for the fact that 115In has more than a single metastable state.

Therefore, the claimed invention is not enabled over its scope.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

11. **Claims 69-85** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The metes and bounds of the claimed invention are vague and ill-defined due to lack of written support by an enabling disclosure as set forth above (see section 9 above), rendering the claims indefinite, because what lacks disclosure is indefinite.

12. **Claims 69-85** are additionally rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The metes and bounds of the claimed invention are vague and ill-defined because of the lack of enablement as explained above in section 10.

Conclusion

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOHANNES P. MONDT whose telephone number is (571)272-1919. The examiner can normally be reached on 8:00 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack W. Keith can be reached on 571-272-6878. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/JOHANNES P MONDT/
Primary Examiner, Art Unit 3663

January 18, 2011.